

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF NEW YORK

UNITED STATES OF AMERICA

v.

22-CR-6009-CJS-MJP

JOHN DOUGLAS LOONEY,

Defendant.

**GOVERNMENT’S RESPONSE TO DEFENDANT’S ATTORNEY AFFIDAVIT IN
SUPPORT OF HIS MOTION FOR A *FRANKS* HEARING**

The United States of America, by and through its attorneys, Trini E. Ross, United States Attorney for the Western District of New York, and Meghan K. McGuire, Assistant United States Attorney, hereby responds to the defendant’s Attorney Affidavit (Dkt. 78) submitted in further support of the defendant’s motion for a *Franks* hearing.

PROCEDURAL BACKGROUND

On January 18, 2022, a federal grand jury returned a three-count Indictment against the defendant, charging him with possessing child pornography, in violation of Title 18, United States Code, Section 2252A(a)(5)(B) and (b)(2). (Dkt. 36.)

On October 5, 2022, the defendant filed, *inter alia*, a motion for a *Franks* hearing. (Dkt. 62.) The Court held two rounds of oral argument on the defendant’s motion for a *Franks* hearing. At the conclusion of the second argument, on May 8, 2023, the court ordered the

defendant to make an offer of proof sufficient to raise an issue of fact that would require a *Franks* hearing.¹

In response, on May 17, 2023, the defendant submitted:

- a. An attorney affidavit (Dkt. 78);
- b. A copy of the warrant at issue in *United States v. Corbett*, 20-CR-525 (Dkt. 78-1);
- c. A copy of a spreadsheet that the defendant alleges was produced in voluntary discovery in *United States v. Corbett* (Dkt. 78-2);
- d. A copy of a document that the defendant alleges was produced in voluntary discovery in *United States v. Corbett* (Dkt. 78-3);
- e. Dr. Brian Levine’s 2017 paper, “Statistical Detection of Downloaders in Freenet” (Dkt. 78-4);
- f. A document of unknown origin titled “Fixing the length distribution in Freenet” (Dkt. 78-5); and
- g. A document titled “Errors in the Levine 2017 paper on attacks against Freenet,” purportedly written by Dr. Arne Babenhauserheide.

APPLICABLE LAW

“There is ... a presumption of validity with respect to the affidavit supporting [a] search warrant,” *Franks v. Delaware*, 438 U.S. 154, 171 (1978). “To show entitlement to a hearing under *Franks*, a defendant must make a ‘substantial preliminary showing’ that (1) any inaccuracies in the affidavit supporting the warrant were made ‘knowingly and intentionally,

¹ The Court also permitted the defendant to file a reply in further support of its supplemental motion (Dkt. 72). That reply is contained in pages 8-11 of the Napier Aff. (Dkt. 78.) Because the Court’s rules do not permit the government to file a sur-reply without leave of Court, and because the government believes that all the defense’s arguments were already rebutted in the government’s original opposition (Dkt. 74), the government is not including any response to the defendant’s reply in this brief. If, however, the Court would like further briefing on any issues related to that motion, the government will be happy to provide it.

or with reckless disregard for the truth,’ and (2) such inaccuracies were ‘necessary to the finding of probable cause.’” *United States v. Torres-Fernandez*, No. 21-19, 2021 WL 4944455, at *1 (2d Cir. Oct. 25, 2021) (quotation omitted)).

“To mandate an evidentiary hearing, the challenger’s attack must be more than conclusory and **must be supported by more than a mere desire to cross-examine.**” 438 U.S. at 171 (emphasis added). “There must be allegations of deliberate falsehood or of reckless disregard for the truth, and those allegations must be accompanied by an offer of proof.” *Id.* “Affidavits or sworn or otherwise reliable statements of witnesses should be furnished, or their absence satisfactorily explained. Allegations of negligence or innocent mistake are insufficient.” *Id.* See also *United States v. Gray*, No. 7:22-CR-00001, 2022 WL 11588923, at *3 (W.D. Va. Oct. 20, 2022) (“To obtain an evidentiary hearing, a defendant must make a ‘substantial preliminary showing’ that the government made a false statement in the warrant affidavit; that the false statement was made knowingly and intentionally; and that it was material—i.e., that it was essential to the finding of probable cause. The first required showing, of falsity, **cannot be conclusory and must rest on affidavits and other evidence.** In other words, the defendant cannot rely on purely subjective disagreement over how the affidavit characterizes the facts; **he must put forth actual evidence showing that the statements at issue are objectively false.**”) (denying defendant’s request for a *Franks* hearing in a case involving the Levine formula) (emphasis added) (internal quotations and citations omitted).

DISCUSSION

A. THE DEFENDANT’S REQUEST FOR A FRANKS HEARING SHOULD BE DENIED BECAUSE THE DEFENDANT HAS FAILED TO MAKE AN OFFER OF PROOF THAT THE STATEMENTS AT ISSUE ARE OBJECTIVELY FALSE

To be entitled to a *Franks* hearing, the defendant must first identify a material inaccuracy in Ofc. Turner’s affidavit. When you synthesize the hundreds of pages of briefing that the defense has submitted in support of its motion, it appears that he is alleging there were two inaccuracies: (1) Ofc. Turner’s description of how Freenet operates (Turner Aff., Dkt. 62-1, ¶¶ 8-17); and (2) Ofc. Turner’s assertion that, “based on [his] training and experience, [he believed] [the Formula] to be a reliable method to determine whether it is significantly more probable than not that a given computer using [Freenet] is the original requestor of a file of interest” (*id.*, ¶ 54).

The defense’s first argument fails because Ofc. Turner never said that requests for blocks of a file are distributed equally among a user’s peers; he accurately described the distribution of requests as “roughly even.” The defense’s second argument fails because they have not submitted a single piece of admissible evidence that tends to undermine the reliability of the Formula. And, even with respect to the defense’s unsubstantiated, theoretical critiques of the Formula, they have failed to establish that Ofc. Turner was aware of or should have been aware of these theoretical critiques at the time that he signed the search warrant affidavit. For these reasons, the defense’s motion for a *Franks* hearing should be denied.

B. OFC. TURNER’S AFFIDAVIT ACCURATELY DESCRIBED HOW FREENET DISTRIBUTES REQUESTS FOR BLOCKS OF A FILE AMONG A USER’S PEERS

In his arguments and briefings, the defendant has stubbornly persisted in mischaracterizing Ofc. Turner’s affidavit. The phrase “even share” is not in Ofc. Turner’s affidavit. The concept of even share is not in Ofc. Turner’s affidavit either.

Instead, every time Ofc. Turner discusses the distribution of requests for blocks of a file in Freenet, he clearly states that they are “roughly” divided among a user’s peers, not exactly. (*See, e.g.*, Turner Aff., Dkt. 62-1, ¶ 15 (“the Network software divides the requests for blocks into roughly equal amounts among the requesting user’s peers”), ¶ 16 (“if User ‘A’ has 10 peers and requests 1000 blocks of a file, roughly 100 blocks are requested from each one of User A’s peers”), ¶ 45 (“relying on the fact that an original requestor is divided in approximately equal parts . . .)).

In his discussion of the Formula, Ofc. Turner is again clear that the division of requests for blocks of a file among a user’s peers is roughly equal, not exactly equal. Ofc. Turner specifically selects an example where the number of blocks requested falls outside of the predicted range. (Turner Aff., Dkt. 62-1, ¶ 51 (“In this example, the law enforcement computer received a request for 100 blocks. That request falls much closer to the expected range for an original request from User X (120-240).”) If the model the Formula is based on were an exact recreation of Freenet’s source code, then actual number of blocks requested by an original requestor would always fall exactly within the range predicted by the Formula. Ofc. Turner chose an example where the actual number of blocks falls close to but outside of

the predicted range in order to demonstrate that the model is not a perfect mirror of the software.

Even the results generated by the application of the Formula to the download requests at issue showed that it generated an estimate, because the actual number of block requests the Ofc. Turner received from the defendant's device fell outside of the Formula's estimated range. For the September 9, 2018 download, the Formula estimated that an original request would seek approximately 127-250 blocks; a second level request would seek approximately 15-31 blocks. The actual request was for 126 blocks. (*Id.*, ¶ 62.) Similarly, for the September 11, 2018 download, the Formula estimated that an original request would seek approximately 92-182 blocks; a second level request would seek approximately 11-23 blocks. The actual request was for 69 blocks. (*Id.*, ¶ 63.)

Throughout his affidavit, Ofc. Turner disclosed that the division of requests was approximately even, not exactly even. The defense has not submitted any evidence tending to show that this description of how Freenet operates in practice is false.

i. The data allegedly collect in United States v. Corbett is not inconsistent with Ofc. Turner's description of how Freenet distributes requests for blocks of files among a user's peers

The defense has failed to submit an affidavit that lays the foundation for authenticating any of the documents it alleges were produced in *United States v. Corbett* (Dkt. 78-2 and 78-3). Therefore, the Court should not give any consideration to these documents.

Notwithstanding the fact that the *Corbett* search warrant and alleged underlying data are wholly irrelevant to this Court's analysis, it is important to point out that the defense's interpretation of the data is inaccurate.

The defense focuses on File of Interest #1. First, it argues that the four FBI nodes received requests for different numbers of blocks. This, the defense argues, shows that requests for blocks are not divided equally among a user's peers. Thus, under the defense's logic, Ofc. Turner's affidavit inaccurately described how Freenet works.

However, as explained above, Ofc. Turner's affidavit never said that requests for blocks are divided evenly. He clearly and repeatedly explains that the division is "roughly" even. "Roughly" signals that the division will not be exact. "Roughly" also signals that there will be outliers; the number of blocks of a file that a downloader requests may be much lower or much higher than they would be if requests were divided in exactly equal amounts.²

Returning to File of Interest #1 in the alleged *Corbett* data, an exactly even distribution would result in each node receiving a request for exactly 27 blocks. In actuality, the nodes received requests for 29, 17, 11, and 10 blocks, respectively. It is fair to say that this distribution of requests is "roughly even." Thus, Ofc. Turner's description of how Freenet works is not inconsistent with the data allegedly collected by the FBI in *United States v. Corbett*.

ii. Freenet's source code is irrelevant

The defense also continues to argue that Freenet was designed to distribute requests for blocks of a file using a "friend of a friend" methodology. The government does not contest that this is how Freenet was designed to operate.

But theory and design are different than practice. Ofc. Turner's affidavit asserts that, in practice, when Freenet's nodes follow all the complex friend of a friend routing directions

² In the *Corbett* case, Node #2751's receipt of a request for only 4 blocks of File of Interest #2 is a perfect example of an outlier.

that the source code dictates, the result is that requests for blocks end up being distributed in roughly even shares among a user's peers. The defense has not submitted any evidence that this is not, in practice, the case.

The defense's repeated references to how Freenet was designed and how its source code is written—without any evidence regarding what happens when that source code is implemented, and the results are studied—do not raise an issue of fact regarding the accuracy of Ofc. Turner's description of how Freenet works in the real world.

C. THE DEFENSE HAS NOT MADE AN OFFER OF PROOF THAT THE LEVINE FORMULA IS UNRELIABLE

The defense has still not submitted any admissible evidence that tends to undermine the accuracy of the Formula's prediction. It has not presented evidence of a single study of the Formula that resulted in a substantially higher false positive rate. It has not presented evidence of a single case in which the Formula was used to obtain a search warrant and no child pornography was found. The defense's submissions do nothing to undermine the reliability of the Formula.

i. The data allegedly collected in the Corbett case does not establish that the Formula has a 75% false positive rate

In its analysis of File of Interest #1 in the *Corbett* case, the defense argues that only one of the four nodes that received a request for blocks of that file "passed" the Levine formula and identified the IP address as an original requestor of the file. The defense goes on to argue that this shows the formula has a 75% false positive rate. That conclusion is wrong.

A false positive occurs when the formula identifies an IP address as the original requestor of a file when, in reality, the IP address was merely relaying a request for the file. A *false negative* occurs when the formula identifies an IP address as a mere relay of a request for a file when, in fact, the IP address was the original requestor. A false positive rate tends to inculcate innocent people. A false negative rate tends to exculpate guilty people. A high false negative rate means that the formula is conservative. In the Fourth Amendment context, it provides greater protection to individuals because, with a high false negative rate, the government will miss more offenders than it will catch.

In the *Corbett* case, the government obtained and executed a search warrant and found child pornography on the defendant's devices. So we know that, in all four instances, the IP address was the original requestor of File of Interest #1. For Node LE #2763, the Formula accurately predicted that the IP address was the original requestor of File of Interest #1. A true positive.

For the three remaining nodes, the defense jumps to the inaccurate conclusion that the Formula did not identify the IP address as the original requestor of File of Interest #1. (*See, e.g., Napier Aff.*, ¶¶ 11.) In fact, there is not enough information in the spreadsheet to determine whether that is the case.

Nonetheless, even assuming that the Formula inaccurately predicted that the IP address was not the original sender of the requests received by Nodes LE #2618, #3026, and #3083, those results would all be false negatives. The Formula inaccurately predicted that the IP address was not the original requestor of File of Interest # 1 when, in fact, it was.

Thus—even assuming the three nodes did not “pass” the Levine Formula, which is probably not the case—the Formula had a 75% false negative rate in this example. In contrast, the false positive rate for this example was 0%; no false positive results were generated. As such, the *Corbett* example does not undermine the Formula’s reliability or false positive rate.

ii. Dr. Arne Babenhauserheide’s “Braindump” has no evidentiary value

Based on the defense’s submission, it appears that Dr. Babenhauserheide is not willing to testify at an evidentiary hearing in this case. The document submitted by the defense—which Dr. Babenhauserheide aptly describes as a “two-hour braindump”—is unsworn and has no evidentiary value.³ In fact, Dr. Babenhauserheide repeatedly qualifies throughout the document that he “might [] have gotten things wrong” and that his analysis is “a quick explanation, not reviewed, [and] may have errors.” (Dkt. 78-6, p. 3-4.) This unsworn “braindump” is not sufficient to raise an issue of fact that would entitle the defense to a *Franks* hearing.

Turning to the merits of Dr. Babenhauserheide’s “braindump,” a careful reading of the document reveals that Dr. Babenhauserheide has never tested the Levine formula. He merely disagrees with the theoretical underpinnings of the Formula. And he suggests that only a model that is identical to Freenet’s source code could accurately predict whether a particular device is an original requestor or mere relayer.

³ Even if Dr. Babenhauserheide were to submit a sworn affidavit, it would be insufficient. Before the Court gives any weight to Dr. Babenhauserheide’s opinions, the government is entitled to cross examine him regarding his qualifications and the bases for his opinions. But Dr. Babenhauserheide is unwilling to testify at an evidentiary hearing. So nothing he submits in writing to the Court can possibly constitute an offer of proof of what the defense anticipates proving at that hearing.

However, Dr. Levine's testing has shown that an even share model does, in practice, accurately predict whether a particular device is an original requestor. Dr. Levine has tested the model in Freenet. And it accurately identified an original requestor in all but approximately 2% of cases.⁴ The model is not an exact re-creation of Freenet's software (statistical models rarely ever are). But, notwithstanding any differences between the model and Freenet, Dr. Levine's testing has proven that the model accurately predicts whether a particular device is the original requestor of a file. Law enforcement's use of the Formula in innumerable investigations throughout the country has reinforced that conclusion. And the defense has submitted no evidence to the contrary.

iii. It is irrelevant that Ofc. Turner's affidavit did not contain a copy of the actual Formula

The defense once again takes issue with the fact that Ofc. Turner's affidavit does not include the Formula. (Napier Aff., Dkt. 78, ¶ 16.) This argument is somewhat inaccurate and wholly irrelevant.

Ofc. Turner initially provided a copy of Dr. Levine's 2017 paper (Dkt. 78-4), which includes the Formula, to Judge Payson. However, the Judge returned the paper and asked Ofc. Turner to summarize the Formula in laymen's terms.

Without explanation, the Formula is meaningless to anyone who does not have a degree in mathematics. It was much more appropriate for Ofc. Turner to explain the theory

⁴ Actually, the Formula has a false positive rate of less than 1%. This was updated in Dr. Levine's 2020 paper. However, because that paper did not exist when Ofc. Turner signed his affidavit, the government is using the 2% false positive rate for the purposes of this motion.

and application of the Formula to Judge Payson than it would have been to present her with a Formula that she did not and could not understand.

Thus, the defendant's argument that the Formula should have been included in the affidavit is meritless. *See United States v. Gray*, 2022 WL 11588923, at *4 (rejecting similar argument in case involving a search warrant based on the Levin Formula and holding that, "although [the affiant] could have provided the specific details of her algorithmic reasoning or attached a copy of the peer-reviewed study as an exhibit to the affidavit, her failure to do so does not change the outcome. Indeed, the detailed information and explanation that she did provide was more than sufficient to clear the relatively low bar of probable cause.").

iv. Dr. Levine's 2017 and 2020 papers have been cited in numerous peer-reviewed, academic papers

Not that it matters to the Court's analysis, but the defense is just wrong when it alleges that "[t]he academic community seems to have ignored the Levine papers." (Napier Aff., Dkt. 78, ¶ 26.) The 2017 paper has been cited by more than 10 other academic papers, and the more recent 2020 paper⁵ has already been cited at least three times. None of the papers that cite Dr. Levine critique or question the validity of the Formula.

⁵ Dr. Babenhauserheide's "braindump" alleges that Dr. Levine's 2020 paper corrected errors in the 2017 paper. (Dkt. 78-6, p. 1.) This is not true. The 2020 paper was a follow up study of the efficacy of the Formula in application on Freenet. It confirmed that the Formula accurately predicted whether a device was the original requestor of a file with a 1% false positive rate. Dr. Babenhauserheide's misbelief that the 2020 paper contained corrections of the 2017 paper is likely because he admittedly "did not read the details" of the 2020 paper. (*Id.*)

D. THE DEFENDANT HAS NOT MADE ANY SHOWING THAT THE ALLEGED INACCURACIES IN OFC. TURNER’S AFFIDAVIT WERE MADE KNOWINGLY, INTENTIONALLY, OR RECKLESSLY

The defendant’s arguments and briefings on this motion have completely ignored the most important part of the *Franks* hearing analysis: the defendant needed to make a substantial showing that Ofc. Turner knew of (or recklessly disregarded) the alleged inaccuracies in his affidavit and intentionally mislead the Court.

Quite the contrary, as the affidavit lays out, all the information at Ofc. Turner’s disposal—his training, his experience, his conversations with other members of law enforcement, and his review of applicable case law—told him that the Formula was a reliable method for assessing the likelihood that evidence of child pornography would be found at a particular location.

The *Corbett* investigation and search warrant all post-date Ofc. Turner’s application for, receipt of, and execution of the search warrant in this case by almost a year. Thus, the *Corbett* case is wholly irrelevant to the Court’s analysis, which is focused on whether Ofc. Turner’s affidavit contained any knowing, intentional, or reckless inaccuracies. Data that was collected a year after Ofc. Turner swore to the accuracy of his affidavit has absolutely no bearing on what Ofc. Turner knew or should have known about the operation of Freenet in January 2019.

Similarly, Dr. Babenhauserheide’s “braindump” appears to have been written in 2020, more than a year after Ofc. Turner executed the affidavit at issue in this case. There is no evidence that Ofc. Turner was aware of Dr. Babenhauserheide’s critiques before he swore to

the accuracy of that affidavit. As such, Dr. Babenhauserheide's opinions are irrelevant to the Court's analysis.

CONCLUSION

Because the defendant failed to make a substantial preliminary showing that there were any material inaccuracies in Ofc. Turner's affidavit and that any of those alleged inaccuracies were made knowingly, intentionally, or with reckless disregard for the truth, the defendant's motion for a *Franks* hearing should be denied. *See United States v. Popa*, 369 F. Supp. 3d 833, 839 (N.D. Ohio 2019) (denying motion for a *Franks* hearing and motion to suppress warrant based on the same Formula).

Dated: Rochester, New York
May 24, 2023

TRINI E. ROSS
United States Attorney

By: s/Meghan K. McGuire
MEGHAN K. MCGUIRE
Assistant United States Attorney
U.S. Attorney's Office
100 State Street, Suite 500
Rochester, NY 14614
(585) 399-3922
Meghan.McGuire@usdoj.gov